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Commercial Database Search Request

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For all other search requests, fill out the form, print, and submit the printout with any attachments to the STIC facility serving your Technology Center.

Tech Center:

(•) TC 1600 ( ) TC 1700 ( ) TC 2100 ( ) TC 2600
( ) TC 2800 ( ) TC 3600 ( ) TC 3700 ( ) Other

Enter your Contact Information below:

Name: Clinton Ostrup

Employee Number: 78537 Phone: 703-308-3627

Art Unit or Office: 1614 Building & Room Number: CM1-2A12

Enter the case serial number (Required): 09/701,989

If not related to a patent application, please enter NA here.

Class / Subclass(es) 424/401 and 514/021

Earliest Priority Filing Date: June 9,1998

Format preferred for results:

☐ *Paper* ☐ *Diskette* ☑ *E-mail*

Point of Contact:
Alexandra Waclawiw
Technical Info. Specialist
CM1 6A02 Tel: 308-4491

Provide detailed information on your search topic:

P.U. 3-10-03
Signed out 3-11

- In your own words, describe in detail the concepts or subjects you want us to search.
- Include synonyms, keywords, and acronyms. Define terms that have special meanings.
- *For Chemical Structure Searches Only*
  Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers
- *For Sequence Searches Only*
  Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.
- Provide examples or give us relevant citations, authors, etc., if known.
- FAX or send the **abstract, pertinent claims** (not all of the claims), **drawings, or chemical structures** to your EIC

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37

or branch library.

Enter your Search Topic Information below:

Please search for the generic Formula of claim 8 and then claim 1, as they have limited the formula of claim 8. I have also printed the specific exemplified compounds in the application which are attached to this form. If/when you find these compounds, will you also search for them as inhibiting or inhibitors of the transport of anandamide.

Thank you,

Clinton Ostrup

Special Instructions and Other Comments:
(For fastest service, let us know the best times to contact you, in case the searcher needs further clarification on your search.)

My normal work hours are M-F 8-4:30.

Press ALT + F, then P to print this screen for your own information.

SEND RESET

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=> fil reg
FILE 'REGISTRY' ENTERED AT 14:37:24 ON 10 MAR 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:     9 MAR 2003  HIGHEST RN 497220-90-3
DICTIONARY FILE UPDATES:    9 MAR 2003  HIGHEST RN 497220-90-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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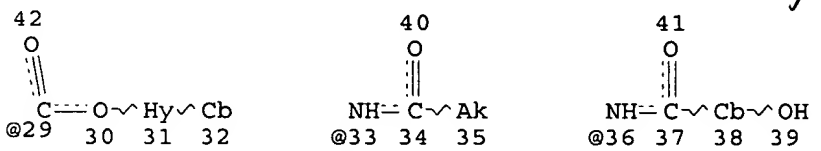
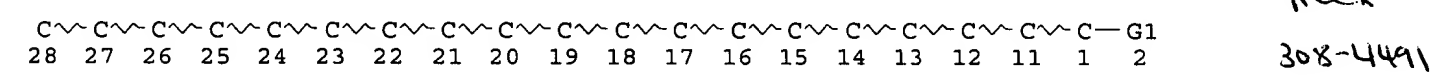


* Structures in Cl. 1 and Cl. 8 were too broad to search. I searched the structures in Table 1. If you have any questions, please let me know.

Alex
308-4491

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GGCAT   IS MCY  UNS  AT  38
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E2 O  AT  31

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  34

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100.0% PROCESSED 146616 ITERATIONS                      218 ANSWERS
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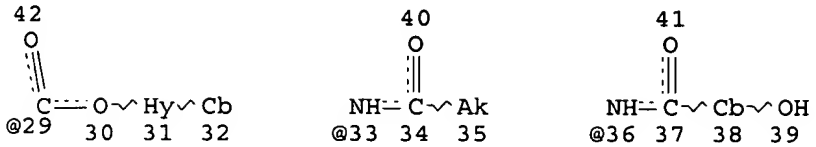

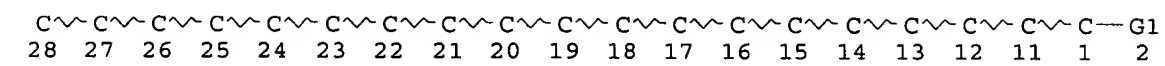


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GGCAT   IS MCY  UNS  AT  38
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E2 O  AT  31

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RING(S) ARE ISOLATED OR EMBEDDED
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L9                STR
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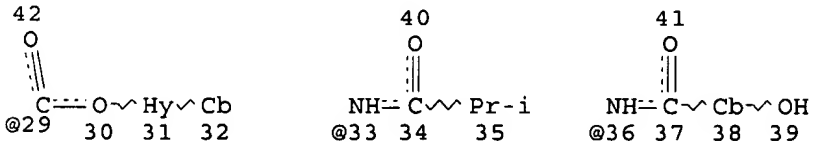

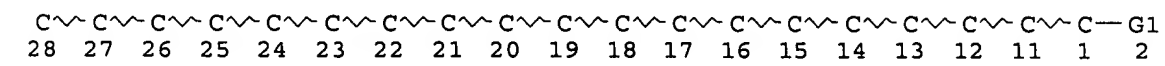


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VAR G1=33/29/36
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  SAT  AT  31
GGCAT   IS MCY  UNS  AT  32
GGCAT   IS MCY  UNS  AT  38
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E2 O  AT  31

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  34
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STEREO ATTRIBUTES: NONE
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100.0% PROCESSED 206 ITERATIONS 6 ANSWERS
SEARCH TIME: 00.00.01

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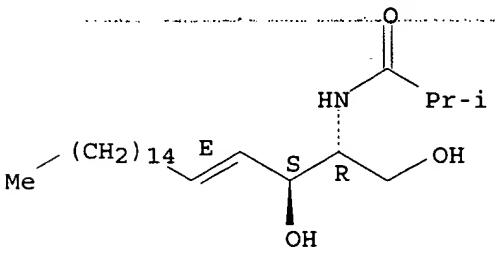
L12 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN 409087-48-5 REGISTRY
CN Propanamide, N-[(1R,2S,3E)-2-hydroxy-1-(hydroxymethyl)-3-nonadecenyl]-2-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C24 H47 N O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.
Double bond geometry as shown.



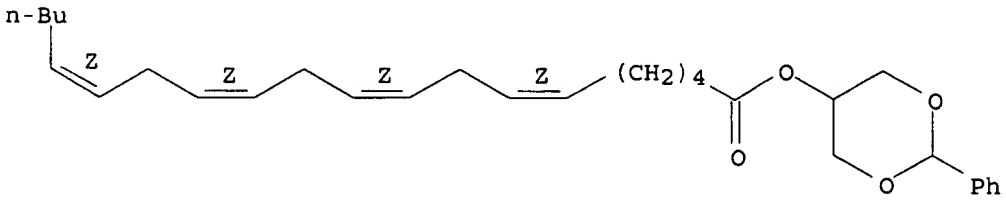
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 136:309777

L12 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN 291312-47-5 REGISTRY
CN 6,9,12,15-Eicosatetraenoic acid, 2-phenyl-1,3-dioxan-5-yl ester, (6Z,9Z,12Z,15Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C30 H42 O4
SR CA
LC STN Files: CA, CAPLUS

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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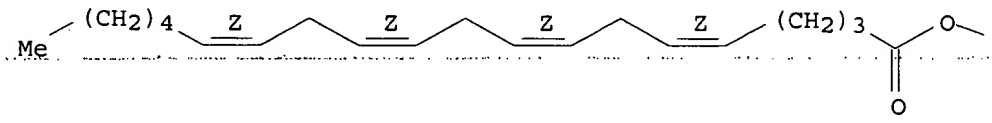
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:222922

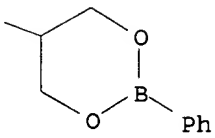
L12 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN 286834-29-5 REGISTRY
CN 5,8,11,14-Eicosatetraenoic acid, 2-phenyl-1,3,2-dioxaborinan-5-yl ester, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C29 H41 B O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



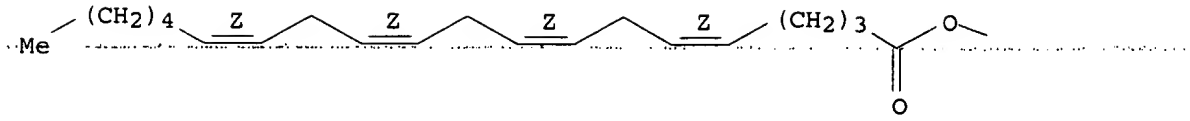
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:135131

L12 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN 252191-64-3 REGISTRY
CN 5,8,11,14-Eicosatetraenoic acid, 2-phenyl-1,3-dioxan-5-yl ester, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C30 H42 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Double bond geometry as shown.

PAGE 1-A



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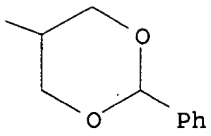

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2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

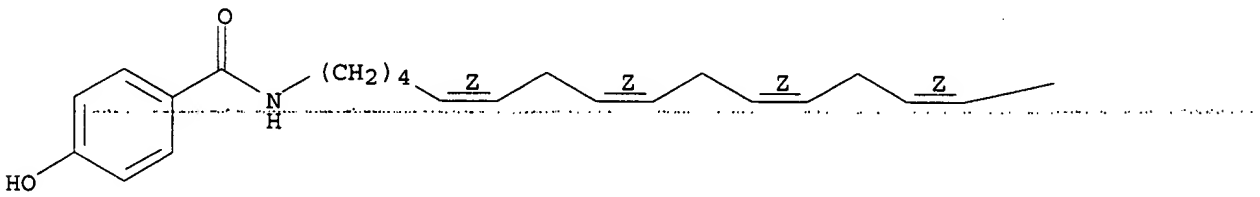
REFERENCE 1: 133:135131

REFERENCE 2: 132:22820

L12 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN 251908-92-6 REGISTRY
CN Benzamide, N-(5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenyl-4-hydroxy- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C27 H39 N O2
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Double bond geometry as shown.

PAGE 1-A



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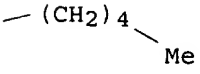


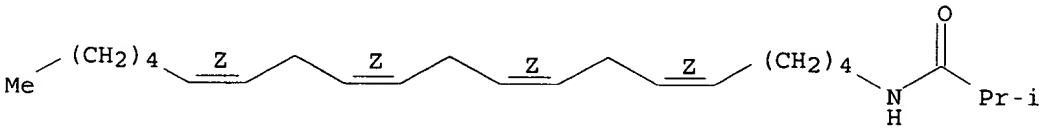
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 132:22820

L12 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN 251908-91-5 REGISTRY
CN Propanamide, N-(5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenyl-2-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C24 H41 N O
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Double bond geometry as shown.



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1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 132:22820

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SESSION CONTINUES IN FILE 'REGISTRY'

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 14:37:45 ON 10 MAR 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 10 Mar 2003 VOL 138 ISS 11
FILE LAST UPDATED: 9 Mar 2003 (20030309/ED)

This file contains CAS Registry Numbers for easy and accurate

substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

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=> d que nos l16
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L6              SCR 1016
L7              STR
L8          218 SEA FILE=REGISTRY SSS FUL L7 AND L6 AND L5
L9              STR
L12           6 SEA FILE=REGISTRY SUB=L8 SSS FUL L9
L13           4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L12
L14         142 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L8
L15           3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND ANANDAMID?/OBI
L16           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 OR L13


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L16  ANSWER 1 OF 6  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2002:96210  HCAPLUS
DOCUMENT NUMBER:          136:309777
TITLE:                    The Synthesis and Biological Characterization of a
                          Ceramide Library
AUTHOR(S):                Chang, Young-Tae; Choi, Jaehwa; Ding, Sheng; Prieschl,
                          Eva E.; Baumruker, Thomas; Lee, Jae-Mok; Chung,
                          Sung-Kee; Schultz, Peter G.
CORPORATE SOURCE:         Department of Chemistry, The Scripps Research
                          Institute, San Diego, CA, 92037, USA
SOURCE:                   Journal of the American Chemical Society (2002),
                          124(9), 1856-1857
                          CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER:                American Chemical Society
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   A facile synthesis of a combinatorial ceramide library and their
     activities in the NF-.kappa.B pathway and in apoptosis
     induction/prevention were demonstrated.  A novel NF-.kappa.B activating
     mol. was discovered among ceramide contg. .beta.-galactose, and the
     structural requirements of ceramides for apoptosis induction was
     elucidated.
CC   26-3 (Biomolecules and Their Synthetic Analogs)
     Section cross-reference(s): 1, 33
IT   409084-94-2P   409084-95-3P   409084-96-4P   409084-97-5P   409084-98-6P
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409087-91-8P 409087-92-9P

RL: BSU (Biological study, unclassified); CPN (Combinatorial preparation); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation)
(synthesis and biol. characterization of a ceramide library)

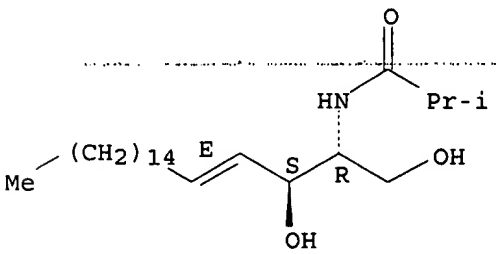
IT **409087-48-5P**

RL: BSU (Biological study, unclassified); CPN (Combinatorial preparation); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation)
(synthesis and biol. characterization of a ceramide library)

RN 409087-48-5 HCAPLUS

CN Propanamide, N-[(1R,2S,3E)-2-hydroxy-1-(hydroxymethyl)-3-nonadecenyl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:300461 HCAPLUS
DOCUMENT NUMBER: 134:305335
TITLE: Retro-**anandamides**, high affinity and stability cannabinoid receptor ligands
INVENTOR(S): Makriyannis, Alexandros; Liu, Qian; Goutopoulos, Andreas
PATENT ASSIGNEE(S): University of Connecticut, USA
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001028498	A2	20010426	WO 2000-US41248	20001018
WO 2001028498	A3	20010913		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2001019692	A5	20010430	AU 2001-19692	20001018
EP 1226112	A2	20020731	EP 2000-982697	20001018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				

PRIORITY APPLN. INFO.: US 1999-160033P P 19991018
WO 2000-US41248 W 20001018
OTHER SOURCE(S): MARPAT 134:305335

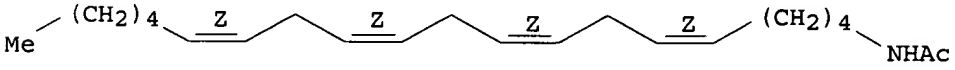
AB Novel retro-anandamides are presented which have high affinities for the cannabinoid CB1 and/or CB2 receptor sites. Further, most of the analogs exhibit greater metabolic stability than arachidonylethanolamide. The improved receptor affinity and selectivity and/or greater metabolic stability make these analogs therapeutically useful as medications in individuals and animals for treatment of pain, glaucoma, epilepsy, nausea assocd. with chemotherapy, as well as suppression of the immune system, enhancement of appetite and in treatment of certain mental disorders.

IC ICM A61K
CC 1-12 (Pharmacology)
IT **215818-35-2P** 335372-49-1P 335372-50-4P 335372-51-5P
335372-52-6P **335372-53-7P** 335372-54-8P 335372-55-9P
335372-56-0P 335372-57-1P 335372-58-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of retroanandamides, high affinity and stability cannabinoid receptor ligands)

IT **215818-35-2P** 335372-49-1P 335372-50-4P 335372-51-5P
335372-52-6P **335372-53-7P** 335372-54-8P 335372-55-9P
335372-56-0P 335372-57-1P 335372-58-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of retroanandamides, high affinity and stability cannabinoid receptor ligands)

IT **215818-35-2P 335372-53-7P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of retroanandamides, high affinity and stability cannabinoid receptor ligands)
RN 215818-35-2 HCAPLUS
CN Acetamide, N-(5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenyl- (9CI) (CA INDEX NAME)

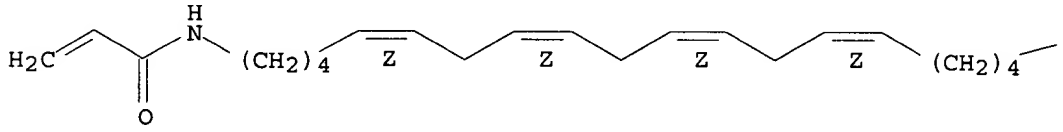
Double bond geometry as shown.



RN 335372-53-7 HCAPLUS
CN 2-Propenamide, N-(5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenyl- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

Me

L16 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:477411 HCAPLUS
DOCUMENT NUMBER: 133:222922
TITLE: Synthesis and biological activities of 2-arachidonoylglycerol, an endogenous cannabinoid receptor ligand, and its metabolically stable ether-linked analogues
AUTHOR(S): Suhara, Yoshitomo; Takayama, Hiroaki; Nakane, Shinji; Miyashita, Tomoyuki; Waku, Keizo; Sugiura, Takayuki
CORPORATE SOURCE: Department of Pharmaceutical Chemistry, Faculty of Pharmaceutical Sciences, Teikyo University, Kanagawa, 199-0195, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (2000), 48(7), 903-907
CODEN: CPBTAL; ISSN: 0009-2363
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors synthesized 2-arachidonoylglycerol, an endogenous cannabinoid receptor ligand, and its metabolically stable ether-linked analogs. 2-Arachidonoylglycerol was synthesized from 1,3-benzylideneglycerol and arachidonic acid in the presence of N,N'-dicyclohexylcarbodiimide and 4-dimethylaminopyridine followed by treatment with boric acid and tri-Me

borate. An ether-linked analog of 2-arachidonoylglycerol was synthesized from 1,3-benzylideneglycerol and 5,8,11,14-eicosatetraenyl iodide. The ether-linked analogs of 2-palmitoylglycerol and 2-oleoyglycerol were synthesized from 1,3-benzylideneglycerol and hexadecyl iodide and 9-octadecenyl iodide, resp. The authors confirmed that 2-arachidonoylglycerol stimulates NG108-15 cells to induce rapid transient elevation of the intracellular free Ca2+ concns. through a CB1 receptor-dependent mechanism. Noticeably, 2-(5,8,11,14-eicosatetraenyl)glycerol exhibited appreciable agonistic activity, although its activity was significantly lower than that of 2-arachidonoylglycerol. 2-(5,8,11,14-Eicosatetraenyl)glycerol would be a useful tool in exploring the physiol. significance of 2-arachidonoylglycerol, because this compd. is resistant to hydrolyzing enzymes. On the other hand, the ether-linked analogs of either 2-palmitoylglycerol or 2-oleoyglycerol failed to act as a CB1 receptor agonist. These compds. would also be valuable as control mols. in expts. where 2-(5,8,11,14-eicosatetraenyl)glycerol is employed.

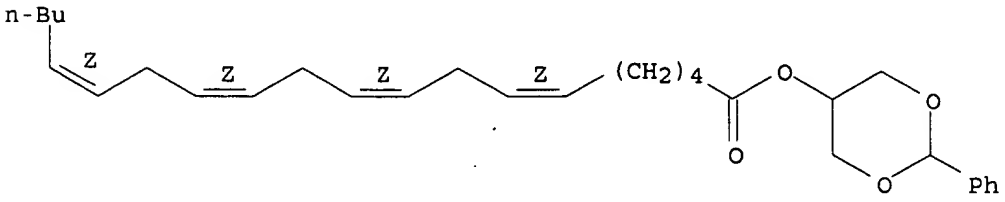
CC 33-6 (Carbohydrates)
Section cross-reference(s): 7, 13

IT 544-77-4P 1708-40-3P, 1,3-Benzylideneglycerol 26524-46-9P
69674-78-8P 291279-33-9P 291279-35-1P **291312-47-5P**
291312-48-6P 291312-49-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and biol. activities of arachidonoylglycerol, an endogenous cannabinoid receptor ligand and its metabolically stable ether-linked analogs)

IT **291312-47-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and biol. activities of arachidonoylglycerol, an endogenous cannabinoid receptor ligand and its metabolically stable ether-linked analogs)

RN 291312-47-5 HCAPLUS
CN 6,9,12,15-Eicosatetraenoic acid, 2-phenyl-1,3-dioxan-5-yl ester, (6Z,9Z,12Z,15Z)- (9CI) (CA INDEX NAME)

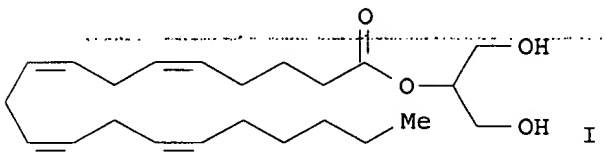
Double bond geometry as shown.



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:379744 HCAPLUS
DOCUMENT NUMBER: 133:135131
TITLE: Facile synthesis and stabilization of 2-arachidonylglycerol via its 1,3-phenylboronate ester
AUTHOR(S): Seltzman, Herbert H.; Fleming, Denise N.; Hawkins, Gregory D.; Carroll, F. Ivy
CORPORATE SOURCE: Chemistry and Life Sciences, Research Triangle Institute, Research Triangle Park, NC, 27709, USA

SOURCE: Tetrahedron Letters (2000), 41(19), 3589-3592
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:135131
GI



I

AB 2-Arachidonylglycerol (2-Ara-Gl) (I) was synthesized via the intermediacy of its 1,3-phenylboronic acid ester. The boronate ester is easily stable enough to enable chromatog. resoln. from the corresponding 1-Ara-Gl boronate ester on normal phase elution yet immediately and completely hydrolyzes to 2-Ara-Gl and phenylboronic acid, without isomerization, by simple soln. in aq.-org. solvents. The phenylboronate ester of this 2-acylglycerol has the added advantage of being markedly more stable to both isomerization and oxidn. upon storage than the labile 2-Ara-Gl.

CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 33

IT **252191-64-3P 286834-29-5P** 286834-30-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(facile synthesis and stabilization of 2-arachidonylglycerol via 1,3-phenylboronate ester)

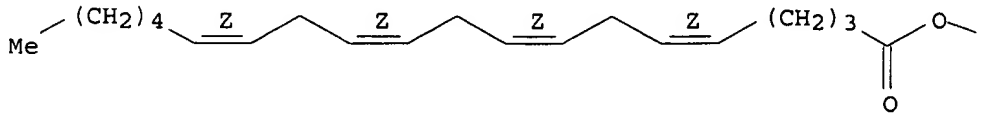
IT **252191-64-3P 286834-29-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(facile synthesis and stabilization of 2-arachidonylglycerol via 1,3-phenylboronate ester)

RN 252191-64-3 HCAPLUS

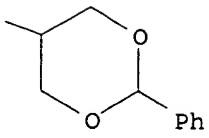
CN 5,8,11,14-Eicosatetraenoic acid, 2-phenyl-1,3-dioxan-5-yl ester, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



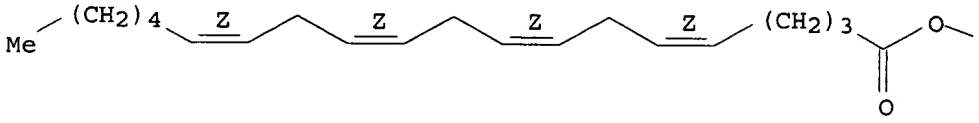
PAGE 1-B



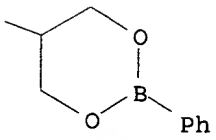
RN 286834-29-5 HCAPLUS
CN 5,8,11,14-Eicosatetraenoic acid, 2-phenyl-1,3,2-dioxaborinan-5-yl ester, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:795784 HCAPLUS
DOCUMENT NUMBER: 132:22820
TITLE: Preparation of arachidonyl amine amides as inhibitors of the **anandamide** transporter and their use as analgesics
INVENTOR(S): Makriyannis, Alexandros; Lin, Sonyuan; Piomelli, Daniele; Goutopoulos, Andreas
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9964389	A1	19991216	WO 1999-US12900	19990609
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2337822	AA	19991216	CA 1999-2337822	19990609

EP 1084098 A1 20010321 EP 1999-930176 19990609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
JP 2002517479 T2 20020618 JP 2000-553399 19990609
PRIORITY APPLN. INFO.: US 1998-88568P P 19980609
WO 1999-US12900 W 19990609
OTHER SOURCE(S): MARPAT 132:22820

AB Arachidonyl amine amides (e.g., arachidonyl amine 4-hydroxybenzoic acid amide; IC50 50 nM) were prepd. and tested as competitive anandamide transport inhibitor,s and their use as analgesics (no data) is proposed.

IC ICM C07C053-00
ICS C07C063-00; C07C229-00; A01N037-02; A01N037-06; A61K031-22; A61K031-23

CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1

ST arachidonyl amine amide prepn **anandamide** transporter inhibitor

IT Analgesics
(**anandamide** transporter-competitive arachidonyl amine amides)

IT 220556-77-4P **251908-91-5P 251908-92-6DP**, tritiated derivs. **251908-92-6P** 251908-93-7P **252191-64-3P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of arachidonyl amine amides as inhibitors of the **anandamide** transporter and their use as analgesics)

IT 94421-68-8, **Anandamide**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of arachidonyl amine amides as inhibitors of the **anandamide** transporter and their use as analgesics)

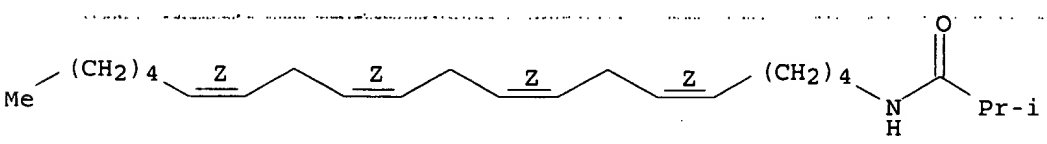
IT 57-57-8, .beta.-Propiolactone 506-32-1, Arachidonic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of arachidonyl amine amides as inhibitors of the **anandamide** transporter and their use as analgesics)

IT 13487-46-2P, Arachidonyl alcohol 194659-91-1P, 5,8,11,14-Eicosatetraen-1-amine, (5Z,8Z,11Z,14Z)- 220556-79-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of arachidonyl amine amides as inhibitors of the **anandamide** transporter and their use as analgesics)

IT **251908-91-5P 251908-92-6DP**, tritiated derivs. **251908-92-6P 252191-64-3P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of arachidonyl amine amides as inhibitors of the **anandamide** transporter and their use as analgesics)

RN 251908-91-5 HCAPLUS
CN Propanamide, N-(5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenyl-2-methyl- (9CI) (CA INDEX NAME)

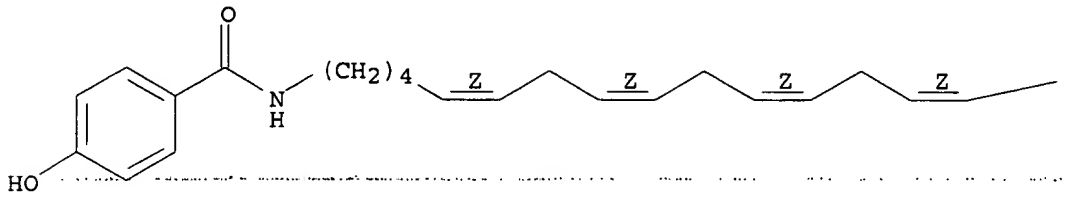
Double bond geometry as shown.



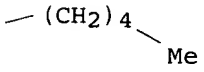
RN 251908-92-6 HCAPLUS
CN Benzamide, N-(5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenyl-4-hydroxy- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



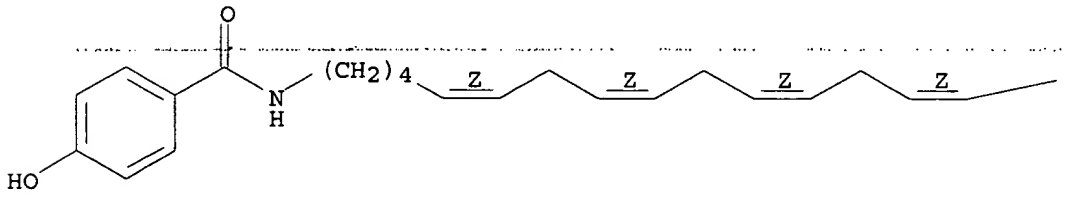
PAGE 1-B



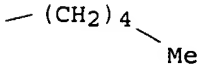
RN 251908-92-6 HCAPLUS
CN Benzamide, N-(5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenyl-4-hydroxy- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



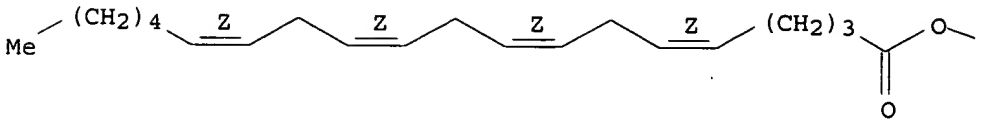
PAGE 1-B



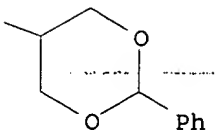
RN 252191-64-3 HCAPLUS
CN 5,8,11,14-Eicosatetraenoic acid, 2-phenyl-1,3-dioxan-5-yl ester, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:635184 HCAPLUS
DOCUMENT NUMBER: 130:151
TITLE: Structural requirements for arachidonylethanolamide interaction with CB1 and CB2 cannabinoid receptors: pharmacology of the carbonyl and ethanolamide groups
AUTHOR(S): Berglund, B. A.; Boring, D. L.; Wilken, G. H.; Makriyannis, A.; Howlett, A. C.
CORPORATE SOURCE: Department of Pharmacological and Physiological Science, St Louis University School of Medicine, St Louis, MO, 63104, USA
SOURCE: Prostaglandins, Leukotrienes and Essential Fatty Acids (1998), 59(2), 111-118
CODEN: PLEAEU; ISSN: 0952-3278
PUBLISHER: Churchill Livingstone
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Analogs of arachidonylethanolamide (anandamide) were prepd. to investigate the structural requirements for ligand binding to and activation of the CB1 and CB2 cannabinoid receptors. The importance of the presence and the placement of the carbonyl was examd. with analogs lacking the carbonyl or with the carbonyl amide order reversed. The presence and location of the carbonyl is essential for high-affinity binding to both cannabinoid receptor subtypes, and for detn. of signal transduction via G-proteins. Me groups were substituted on the 1'- and 2'-positions of arachidonylethanolamide and the significance of chirality was examd. Stereochem. differences in the ethanolamide group influence the affinity for both cannabinoid receptor subtypes and the signal transduction capabilities of the methanandamide derivs.

CC 1-3 (Pharmacology)
Section cross-reference(s): 13, 26

IT 94421-68-8, **Anandamide** 157182-47-3 157182-48-4 157182-49-5 157182-50-8
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(structural requirements for arachidonylethanolamide interaction with CB1 and CB2 cannabinoid receptors in relation to pharmacol. of carbonyl

and ethanolamide groups and activation of signal transduction)

IT 215818-33-0P 215818-34-1P **215818-35-2P**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(structural requirements for arachidonylethanolamide interaction with CB1 and CB2 cannabinoid receptors in relation to pharmacol. of carbonyl and ethanolamide groups and activation of signal transduction)

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT